What is claimed is:

1. A network for communicating multicast packets in a multicast session from a source to a plurality of multicast recipients in that session, comprising:

a repair server in the network monitoring received ones of the packets to said recipients, the repair server including a missing packet detector; and

at least one retransmit server in the network buffering portions of the packets during the session;

said repair server detecting missing packets and in response to a subscriber request for repair services, requesting missing packets from said retransmit server.

2. A method for repairing multicast packets in a network carrying multicast packets in a multicast session from a source to a plurality of multicast recipients in that session, comprising:

receiving a subscriber request for multicast repair services;

monitoring received ones of the packets to said recipients with a repair server in the network in response to said subscriber request;

buffering portions of the packets during the session at a retransmit server in the network; and

detecting missing packets in said repair server and in response to said subscriber request, requesting missing packets from said retransmit server.

3. The method of claim 2, which further comprises:

allowing the recipient to selectively subscribe to the repaired multicast session as a network supplied service.

4. The method of claim 2, which further comprises:

limiting the recipient to receive the repaired multicast session as a network supplied service only if the recipient has subscribed to the multicast repair service.

5. The method of claim 2, which further comprises:

encrypting the repaired multicast session as a network supplied service and allowing the recipient access thereto only if the recipient has subscribed to the multicast repair service.

6. A method for repairing multicast packets in a network carrying multicast packets in a multicast session from a source to a plurality of multicast recipients in that session, comprising:

receiving a request from a recipient's receiver to join a first IP multicast session;

intercepting said request and sending it to a controller in a repair server;

forwarding the to a subscription server to determine if said recipient has subscribed to a repair service;

receiving a positive response at the controller from the subscription server and determining whether a repair/encryption module exists in the repair server for the first multicast session;

selecting at the controller a new IP multicast address and port number and a decryption key for a second IP multicast session;

sending the new IP multicast address and port number and the decryption key to the translator/decryption module;

creating with the controller a new repair/encryption module and providing the new repair/encryption module with the new IP multicast address and port number and the encryption key;

monitoring received ones of the packets to the recipient in the first session with the repair server;

buffering portions of the packets from the first session at a retransmit server in the network; and

detecting missing packets in said repair server and in response to said subscriber request, requesting missing packets from said retransmit server.

7. A method of claim 6, which further comprises:

said monitoring including reading packets from said first IP multicast session and checking if there are any missing packets;

requesting said retransmit server to obtain the missing packets;

encrypting packets with the repair/encryption module and writing them to the second IP multicast session;

processing the packets for the second IP multicast session by an IP stack on the receiver;

sending the processed packets to the translator/decryption module;

decrypting the packets at the translator/decryption module and modifying the destination IP address and port number from values for the second session to values for the first session; and

sending the packets to the recipient;

whereby the recipient may request that a multicast session be repaired without interrupting any applications that already executing in the receiver.

3 8. The method of claim 2 7, which further comprises:

allowing the recipient to selectively subscribe to the repaired multicast session as a network supplied service.

4 9. The method of claim 2 7, which further comprises:

limiting the recipient to receive the repaired multicast session as a network supplied service only if the recipient has subscribed to the multicast repair service.

5 10. The method of claim 2 7, which further comprises:

encrypting the repaired multicast session as a network supplied service and allowing the recipient access thereto only if the recipient has subscribed to the multicast repair service.

Sub A2 11. A system for repairing multicast packets in a network including a source of multicast packets in a multicast session and a plurality of multicast recipients in that session, comprising:

a controller in a repair server for receiving and forwarding a request from a recipient to join a first IP multicast session;

a subscription server receiving the request from the controller to determine if said recipient has subscribed to a repair service;

said controller receiving a positive response from the subscription server and determining whether a repair/encryption module exists in the repair server for the first multicast session;

said controller generating a new IP multicast address and port number and a decryption key for a second IP multicast session;

said controller sending the new IP multicast address and port number and the decryption key to the translator/decryption module;

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a new repair/encryption module created by the controller, said controller providing thereto the new repair/encryption module with the new IP multicast address and port number and the encryption key;

said repair server monitoring received ones of the packets to the recipient in the first session;

a retransmit server in the network buffering portions of the packets from the first session;

said repair server detecting missing packets and in response to said subscriber request, requesting missing packets from said retransmit server.

12. The system of claim 11, which further comprises:

said repair server reading packets from said first IP multicast session and checking if there are any missing packets and requesting said retransmit server to obtain the missing packets;

said repair/encryption module encrypting packets and writing them to the second IP multicast session;

an IP stack in the receiver processing the packets for the second IP multicast session and sending the processed packets to the translator/decryption module;

said translator/decryption module decrypting the packets and modifying the destination IP address and port number from values for the second session to values for the first session and sending the packets to the recipient;

whereby the recipient may request that a multicast session be repaired without interrupting any applications that already executing in the receiver.